

Document 4b, Response to Office Action 2

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conce'd.

buried conductors is surrounded by the induced opposite polarity in said mass.

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25) The array of claim 23 comprising of a multitude of parallel connected high voltage dielectrically insulated conductor assemblies.
- 29
26) An assembly of claim 25 comprising of a sheet of conductor material sandwiched between two sheets of dielectric insulators.
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27) The electric charge induced in said conductive mass of claim 25 wherein said charge accumulation is complemented by a magnetically coupled low voltage electric field applied to said mass.

REMARKS/ARGUMENTS

As per **Detailed Action 1**, the title has been changed to be more descriptive of the invention.

Enclosed is an information disclosure document as per **Detailed Action 2** and phone call of Thursday, July 18, 2002.

Also, the applicant has rewritten all claims to define more particularly and distinctly so as to overcome the technical rejections and define the invention patentably over the prior art.

The Objection of Detailed Action 3 of Claim Rejection Under § 112

Applicant requests reconsideration and withdrawal of this objection since the claims have a greater number and contain component assembly detail, and since details of the component construction described in the claims are contained in prior art.

Since the component construction described in the claims (tesla coils, magnetic cores, dielectric insulators, transformers, etc) are known prior art items, the details of their construction have been omitted. It is the quality, assembly, and physical disposition of these components that produce unexpected results from the previously assumed unworkability of a high voltage LC (coil/capacitor) circuit when applied to physical power applications.

The Objection of Detailed Action 4 of Claim Rejection Under § 112

Applicant requests reconsideration and withdrawal of this objection since old claim 1 has been removed and has been replaced with new claims 5-18, and since how and where support is provided for a target of any electromagnetic device is dependent on the preferred motion of the target (linear, rotational, or vibrational) and is a known prior art item (rod, arbor and bearings, or pre-tensioned lever, etc.).

The present prior art teaches how movement can be translated to work. The multitude of examples would be too lengthy to discuss here and are well known prior to

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applicants filing date. New claim 17 defines the relationship of the predetermined target motion to known motions and introduces a member that can be any number of prior art items as a means to provide the necessary support for the target and to translate the target's motion in a preferred vector.

The Objection of Detailed Action 5 of Claim Rejection Under § 112

Applicant requests reconsideration and withdrawal of this objection since old claims 1-4 have been removed and have been replaced with new claims 5-27, and since new independent claims 5, 19, and 22 distinctly claim the subject matter that pertains to this invention: an LC circuit that uses magnetic and electric fields to produce motion and how buried high voltage electric fields within a conductive mass induces its opposite charge within that mass, i.e. charge induction.

Figures 4 and 6 within the specification portray LC circuits, which is an established subject matter. There are a plethora of prior art high voltage LC devices on the market (spark coils, flyback transformers, tesla coils, radio transmitters, etc.). Since new claim 5 distinctly mentions high voltage LC device, in addition, charge induction through a dielectric medium is not new and is established within the prior art with a multitude of capacitors and other devices, Detailed Action 5 has been overcome by the introduction of the term LC device in new claim 5 and with the means of charge induction within new claim 23.

The Objection of Detailed Action 6 of Claim Rejection Under § 112

Applicant requests reconsideration and withdrawal of this objection since old claims 1-4 have been removed and have been replaced with new claims 5-27, and since new claims 5-27 details the components and the structural relationship of the cooperative elements.

The primary coil 20 is the means to induce the magnetic field within the poles as per new claim 9, while the secondary coil 22 is the means to induce the electric field within the poles as detailed in new claims 5-14. How the fields affect the target will be determined by the target's electrical characteristics, new claim 16. Given the induced fields within poles traverse the gap mentioned in new claims 5 and 15 as other prior art devices (induction motors, relays, electro-static motors, etc.), the effect will be somewhat dependant on the target's electrical characteristics. Given the conductive target of new claims 5 and 15-17 is electrically neutral, whatever charge accumulation occurs within the poles will induce its opposite charge (as with any prior art capacitor) within the target causing attraction in this case.

The Objection of Detailed Action 7 and 8 of Claim Rejection Under § 102

Applicant requests reconsideration and withdrawal of these objections since old claims 1-4 have been removed and have been replaced with new claims 5-27; since the references stated (Hosoya) are poor references (in Japanese) with the provided English translation incomplete; and since whatever references provided that are in English, nowhere within such references, is there any mention of a LC device that is in new claim 5.

The Objection of Detailed Action 9 and 10 of Claim Rejection Under § 103

Applicant requests reconsideration and withdrawal of these objections since old claims 1-4 have been removed and have been replaced with new claims 5-27, since the previous objections to Hosoya, and since references stated (Bobbio) is a micro-electromechanical device, a linear only actuator, and designed for low voltages.

The Rejection of Claims 1-4 On Bobbio and Hosoya Is Overcome

The last Office Action rejected old independent claims 1-4 on Bobbio and Hosoya. All the new claims have been rewritten in more detail to define patentably over these references, and any combination thereof. Applicant requests reconsideration of this rejection, as now applicable to new claims 5-27, for the following reasons:

1. The references in Bobbio and Hosoya are poor and misunderstood references.
2. The proposed combination is not relevant to the new claims 5-27.
3. These novel physical features of new claims 5-27, and their synergism, produce new and unexpected results hence are unobvious and patentable over these references and prior art.

The References and Differences of the Present Invention Thereover

Applicant will discuss the references, how they relate to points one and two, and then the general novelty of the present invention and its unobviousness over the references, point three.

Hosoya teaches a motivator 2 driving a target 11 by electrostatic electrodes P1-8 and a magnetic field. The electrodes in Hosoya figures are not completely surrounded by any conductive material, magnets or otherwise, as in new claim 13; and consequently have a direct effect on the target instead of an indirect effect as with an induced charge of new claims 22-27. In addition, magnets in Hosoya specification are permanent magnets and are not part of the circuitry shown in Hosoya figures 2 and 3 as they are in shown in applicant's circuitry (figures 4 and 6). Nor, is there a dynamic electrical relationship occurring in Hosoya between the electrostatic field and the magnetic field such as any LC circuit has or as in applicant's specifications and claims.

As stated previously, it is not shown in Hosoya figures 1, 2, and 4 that the electrostatic electrodes P1-8 are not buried in the conductive ferromagnetic body. In addition, Hosoya figure 2 illustrates a DC power supply 23. However, there is no indication within the specifications provided of that DC power supply being electrically connected to the conductive ferromagnetic body. Instead figure 2 (Hosoya) indicates 23 is the power supply for what appears to be the motor controller 24. The combined references of Hosoya insulation layer 3 may be made of dielectric material as with the Bobbio patent and yet there isn't any mention of an LC circuit in either reference. The high voltages present with this invention's new claim 5 would cause a breakdown of specified micro-mechanical dielectric spacers and arc across the closely spaced strips of Bobbio claim 1 or may cause the insulator 3 or 13 (Hosoya) to breakdown or physically separate from the surfaces.

These novel physical features of new claims 5-27, and their synergism, produce new and unexpected results hence are unobvious and patentable over these references and prior art.

Applicant submits that the novel physical features, disposition, and their synergism are also unobvious and hence patentable under § 102 and 103 since they produce unexpected results over these references and prior art.

These new and unexpected results are the assembly of prior art into applicant's system of incorporating coil currents, capacitor currents, and ancillary currents in a complementary manner. The novelty and unobviousness of this invention concerns the following points:

1. Current phase difference of an LC circuit dictates when the magnetic fields are strongest the electric fields are at their weakest and vice versa.
2. Magnetic field power is applied by the primary coil 20 while the high voltage secondary 22 provides the electric field power.
3. Capacitance material of the capacitor of this LC circuit (core 10) is magnetically coupled to the coil thereby increasing capacitance potential.
4. What was once considered losses, such as eddy currents and dielectric leakage; contribute to the effectiveness of the device.
5. It allows large electric charge accumulations to be in close proximity with each other without arcing; thereby allowing the device to utilize the greater amount of force per unit of current available in Coulomb's Law and electric fields than is present with magnetic fields.
6. As with any LC circuit, when this LC circuit is brought into a resonant condition, the only impedance losses will be the DC resistance of the wire; therefore, a more efficient device.
7. The synchronous movement of a conductive target between the poles encourages charge accumulation within the poles therefore more effective.
8. The compilation of all the previous points into one device creates a unique item unobvious over the prior art.

As in point 1, this device uses the phase difference between the respective currents of coils and capacitors to provide a more constant pull not present in single-phase AC magnets. Instead of fields occurring twice per AC cycle, fields are present four times a cycle.

As in point 2, not only is the secondary coil 22 (new claims 5, 6, 19, and 20) magnetically coupled to the primary 20, each coil is dedicated to a particular task. The primary provides magnetic excitation to the poles while the secondary is the source of electric excitation of the poles.

The secondary becomes a means to generate an electric field and is also magnetically coupled to the charge holding medium (new claims 7, 8, 20, 22-27) of the capacitor that exhibits this electric field (point 3). This low voltage electric field around the capacitor array of new claim 5 allows for a greater charge accumulation in the core/capacitance material therefore power.

Cited References

Patent Number	Name	Classification	Date
269,281	Gramme	388/840	December 19, 1882
382,279	Tesla	318/727	May 1, 1888
735,621	Thomson	318/116	August 4, 1903
3,414,742	Fisher, et al.	310/308	December 3, 1968
3,629,624	Staudte	310/309	December 21, 1971
3,951,000	Ferriss, et al.	74/5.6D	April 20, 1976
4,225,801	Parker, Jr.	310/308	September 30, 1980
4,344,103	Nagamoto	361/160	August 10, 1982
5,726,509	Benecke, et al.	310/40MM	March 10, 1998
5,965,968	Robert, et al	310/310	December 12, 1999

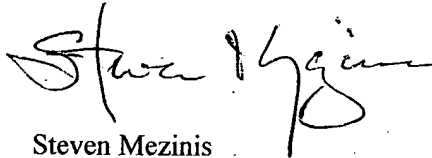
Reasons for Delay

I hereby petition to reinstate an abandoned patent application due to an unavoidable delay for the following reasons:

- 1) After the patent was originally filed, I received the first office action (1). My response (claims amendment) to the office action was by fax through my computer. I did a follow-up phone call to Karl Tamai to ensure that the fax got there and that the lines of communication were open and working.
- 2) Upon receipt of the second office action (2), I wrote a cover letter (4a) and addressed the issues presented in that office action (4b). This too was faxed through my computer.
- 3) Unfortunately, by causes unknown, this fax never reached you. I did not do a follow up phone call at that time because I assumed the lines of communication were working. When not hearing from PTO, I assumed my amendments were accepted. This first indication I had that something was wrong was the office action dated 12/03/02.
- 4) In addition, because the fax was done through my computer and my computer was restructured since then, I have no record or proof that the fax was made. (The computer was giving me problems, I went to a backup, and the backup did not contain the fax log.)

In conclusion, I request that abandonment of patent application no. 09/682/451 be reconsidered. I recognize that my ignorance is a significant variable to this situation. However, this request is made under the 'unavoidable' category because it definitely was unintended and the cause of the delay that brought the application into abandonment was a failed fax.

Very respectfully,



Steven Mezinis

01/05/03

Date: